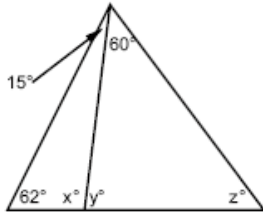


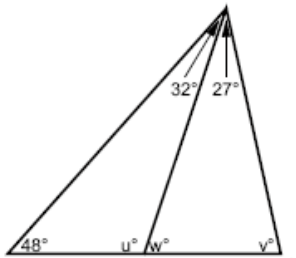
Worksheet 5.1: Angles of a Triangle

Find the values of the variables.

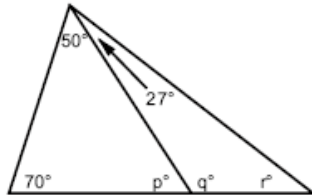
1.



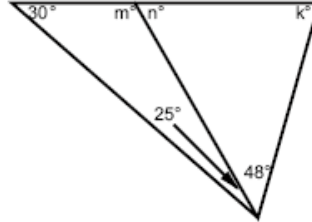
2.



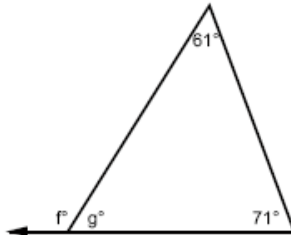
3.



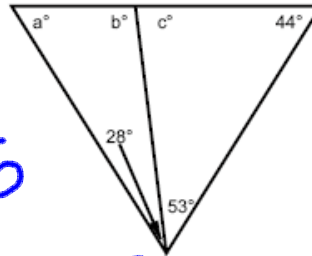
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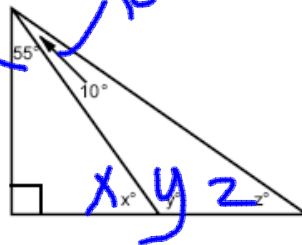
5.



6.



7.



55
10

$$180 - 55 = 125$$

$$125 - 90 = 35$$

$$x = 35$$

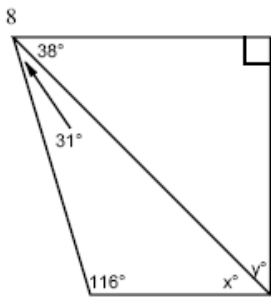
$$35 + y = 180$$

$$y = 145$$

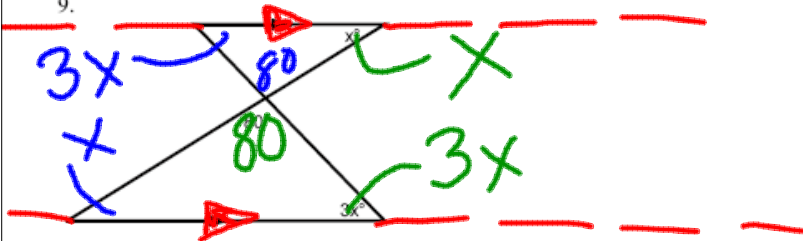
$$145 + 10 = 155$$

$$180 - 155 = 25$$

$$z = 25$$



9.



$$180 - 80 = 100$$

$$\frac{100}{4} = \frac{4x}{4}$$

$$x = 25$$

10. What is the measure of each angle of an equiangular triangle? Explain.

11. Is every equilateral triangle isosceles? Is every isosceles triangle equilateral? Explain.

12. The measure of one angle of a triangle is 115. The other two angles are congruent. Find their measures.

13. A right triangle has acute angles whose measures are in the ratio 1 : 2. Find the measures of these angles.

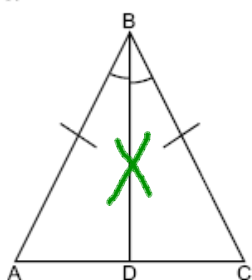
14. Two angles of a triangle measure 64 and 48. Find the measure of the largest exterior angle. Explain.

15. The ratio of the angle measures in $\triangle ABC$ is 2 : 3 : 4. Find the angle measures. What type of triangle is $\triangle ABC$?

Worksheet 5.2: Congruent Triangles I

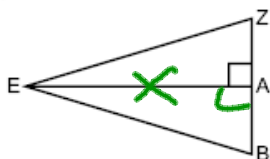
Decide whether you can use the SSS, SAS, ASA Postulate or the AAS Theorem to prove the triangles congruent. If so, write the congruence and identify the postulate or theorem. If not, write *not possible*.

1.



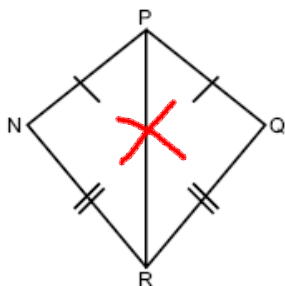
SAS

2.



not enough
info

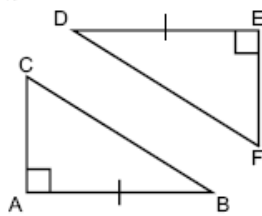
3.



SSS

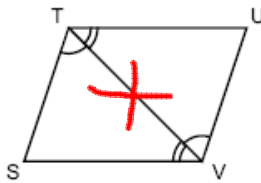
SSS
SAS
ASA
AAS
HL

4.

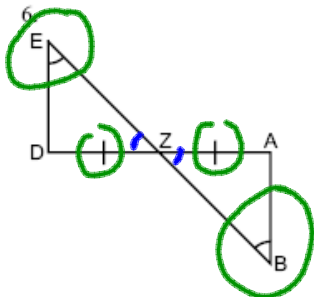


not enough INFO

5.



ASA



AAS